Article

TOURISM ECONOMICS
The Business and Finance of Tourism and Recreation

Tourism Economics
2019, Vol. 25(4) 593–612

DOI: 10.1177/1354816618810563
journals.sagepub.com/home/teu
SAGE

Do green awards and certifications matter? Consumers' perceptions, green behavioral intentions, and economic implications for the hotel industry: A Sri Lankan perspective

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Abstract

This study examines the effects of green or eco-friendly certificates and awards on consumers' perceived value within the hotel industry, and the roles of consumers' perceived value in predicting satisfaction, intention to revisit, and intention to pay a green premium. The results of partial least squares structural equation modeling analysis from a sample of 250 guests in Sri Lankan hotels showed that our unified model includes a satisfactory level of prediction power to test the hypothesized relationships. Green certificates and green awards positively affect consumers' perceived value within the hotel industry. The findings also supported the relationship between consumers' perceived value and satisfaction, intention to revisit, and intention to pay a green premium. The empirical findings in the context of Sri Lanka provide another important insight which confirms the positive effects of green certification and green awards on consumers' perceived value and behavioral intentions, such as their intention to revisit and to pay a premium.

Keywords

green awards, green behavioral intention, green satisfaction, perceived green value

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Introduction

The terms "green" and "sustainability" have become a lexicon of the hotel and hospitality industry. Hotel guests or potential consumers are becoming increasingly concerned about corporate green practices and related outcomes, while realizing that their purchasing decisions directly influence the environment (Kim et al., 2017; Laroche et al., 2001; Lee et al., 2010; Moisander, 2007). A growing number of international hotels have engaged in numerous environmentally sustainable initiatives to conserve natural resources, save costs, and enhance their corporate image and reputation. The growth of green hotels (also known as "eco-friendly" or "sustainable" hotels) reflects a long-term trend rather than a short-term fad (Han et al., 2010; Pizam, 2009). In response, currently within the hotel industry there is an increasing number of green awards or labels (Font and Tribe, 2001; GHA, 2017), while some countries and international organizations have established objective-based certification or accreditation programs to recognize these green hotels (Pizam, 2009; Puhakka and Siikamaki, 2012).

Green awards or certifications were originally developed to improve environmental performance by establishing environmental performance goals and implementation systems to help businesses to better manage environmental activities and to enhance internal oversight of environmental performance and improvement (Darnall and Sides, 2008). Hoteliers believe that they can gain marketing leverage by promoting the green awards and/or the certifications that the hotel has won (Enz and Siguaw, 1999). Although it has been found that visitors react positively to eco-labeled or green hotels, answers to questions about how these visitors' perceptions translate into reality are important for future research in the fields of hospitality and tourism (Esparon et al., 2014; Line and Hanks, 2016; Straughan and Roberts, 1999).

Previous research shows that consumers' views about environmental issues and their perceptions of firms' green practices have a significant impact on their behavioral intentions (Becker-Olsen et al., 2006; Gao et al., 2016; Lee and Shin, 2010; Martin et al., 2009). It is also clear that consumers are savvy about the use of technology in searching for hotels with legitimate sources of recognition such as green awards or certifications (Kleinrichert et al., 2012). Due to growing environmental concerns, hotels are driven to make environmental-related investments associated with green awards/certification. Despite the increasing number of environmental awards and labels offered within the tourism sector, there are concerns about the economic value of such accolades (Font and Tribe, 2001; Kleinrichert et al., 2012) and is unclear whether customers are willing to pay more for hotels which have achieved these awards/certifications (Font and Tribe, 2001). This implies that despite companies' heavy investment and marketing efforts in publicizing their positive green management activities, it is not clear how their investments pay off, or whether such activities have a positive impact on consumers' perceptions and their related actions, in particular, green purchasing behavior. Hence, there is a need to focus on the purchasing behavior of guests as it relates to these green-certified/awarded or eco-labeled hotels. Thus, the present research focuses on the impact of green awards/certificates on perceived value, and thereby consumers' satisfaction, intention to revisit, and intention to pay a premium for accommodation in a sustainably managed hotel. In particular, this study examines guests' views of such hotels in Sri Lanka. Prior studies have mainly focused on well-developed "rich" countries (e.g. United States, Japan, and Korea), while studies on developing countries have been very scant. Prior research has only investigated the factors influencing consumer attitudes and behavior toward green practices in the hotel industry in India (Manaktola and Jauhari, 2007). Tourism is the most viable and sustainable economic development option for many developing countries, as start-up costs and barriers to

entry are generally low and require fewer financial resources and less technology (Spenceley, 2012). In their focus on increasing the tourism sector, developing countries generally turn to eco- or green tourism as opposed to mass tourism. These countries have a comparative advantage in terms of unspoiled natural environments, warm climates, picturesque landscapes, and rich biodiversity (Cater, 1993; UNWTO-SNV, 2010). This progress in tourism in developing countries benefits a wide set of stakeholders who are engaged in harnessing natural resources without destroying them. Since tourism is generally labor-intensive, there are opportunities for reducing unemployment (especially for women) and for increasing tourism sites in rural areas. Further, tourism creates a demand for a wide range of supporting products and services provided by small, medium, and micro enterprises in areas such as agriculture, laundry, transport, crafts, and construction, from which the benefits trickle down to diverse sectors and stakeholders. Tourism provides much-needed taxes for governments for infrastructure development and provision of education and health services (UNWTO-SNV, 2010). In developing countries, the planning of tourism infrastructure should therefore be undertaken in an organized and responsible manner to ensure that natural and cultural environments are conserved, while simultaneously providing an economic benefit to host communities and a quality experience for tourists (Spenceley, 2012). Green certifications or awards can benefit hotels by streamlining and enhancing their environmental performance, while providing assurance for guests that their experience is more environmentally friendly (Font and Tribe, 2001). Thus, there is a clear need for research focusing on the economic implications of green awards and certification in developing countries, exploring the ways in which tourism can be operated sustainably while supporting inclusive economic development without harming the rich natural environment.

This study contributes to research in the area of hotels and hospitality in three ways. First, to our knowledge, this is the first study within the field of green hotels to examine the effects of green awards and certificates on green brand image and consumers' perceptions. This study also examines the ways in which consumers' perceptions of environmentally sustainable hotels affect their behavioral intentions such as their satisfaction, intention to revisit, and intention to pay a premium. Second, this study provides empirical evidence on a developing country (Sri Lanka) to show the link between consumers' perceptions and their behavioral intentions toward green hotels. Third, this study also provides economic implications at microlevel, in support of green awards and related policy in Sri Lanka.

The article is organized as follows. In the next section, relevant theoretical background and hypothesis development are presented. Then the methodology and measurement are described. Next, the article reports the results of the analysis and the hypothesis test. The article concludes with implications and suggestions for future research.

Economic implications of green awards/certificates in the hotel sector

Many companies in the tourism sector have realized that "going green" is the way forward for cost saving and for building a sustainable business (Chen and Chang, 2012; Gunarathne and Lee, 2015). With this realization, many companies claim to have green or environmentally friendly practices without necessarily having the credentials. Green awards or certificates allow hotels to form claims about the soundness of their environmental management practices (Font and Tribe, 2001). The economic implications of green awards, certificates or labels can be analyzed at micro- and macrolevels. At a micro-firm level, these green certifications or awards such as ISO 14000, Green Globe, and Green Tourism can improve and streamline a company's environmental management

practices due to their assessment/verification criteria. This results in direct economic gains to an entity by reducing waste, improving resource utilization, and creating savings (Gunarathne and Lee, 2015; Shrivastava, 1995). In addition, favorable environmental credentials such as green awards, certificates, or labels can be beneficial to organizations in many others ways. This is particularly important as many of the benefits stem from being seen to be operating in an environmentally friendly manner, rather than the direct benefits that a hotel can enjoy (Font and Tribe, 2001).

Green awards/certificates can improve the public relations a company has with many external stakeholders such as the general public, government, trading partners, and even employees, which could in turn result in favorable financial gains (Font and Tribe, 2001). A positive green image, fostered through green credentials, enables a company to command higher profit margins and have more inelasticity to price increases (Font and Tribe, 2001; Keller, 1993). These green credentials, while enhancing brand awareness and brand image, can create customer-based "green brand equity" in consumers' minds (Chen, 2010a; Keller, 1993). This distinctive green brand image can differentiate an entity from competitors in communicating the product's major benefits, positioning it toward a target market (Chen and Chang, 2012; Ryu et al., 2008). It will also result in a higher probability of the brand being chosen, greater customer loyalty, and decreased vulnerability to competitors' actions (Keller, 2003). Similarly, green awards/certificates can be used to improve the effectiveness of marketing communications. Firms with green certifications or awards can avoid problems about environmental protection, develop new markets, differentiate their product, and increase competitive advantage (Chen, 2010b; Fraj-Andrés et al., 2009; Gunarathne and Lee, 2015; Mourad and Ahmed, 2012; Shrivastava, 1995). Hence, a hotel can benefit from many direct and indirect economic gains if green awards/certificates are used effectively.

On a microlevel from a customer's point of view, these green-certified hotels or hotels with green awards can offer a more reliable choice when green purchasing decisions are made, facilitating customers in reducing their brand search and offering a chosen holiday destination which is beautiful and unspoiled (Keller, 1993; Font and Tribe, 2001). On a macrolevel, green credentials can benefit the tourism industry and economy at large by providing an incentive for firms to improve their environmental performance while enhancing their financial benefits. Hence, these certifications and awards can play an important role in developing countries, such as Sri Lanka, which usually sacrifice environmental protection in the pursuit of rapid economic development.

If hotels are convinced of the direct and indirect benefits of green awards/certificates, there is motivation for them to obtain these credentials, as the certifications involve some costs (Esparon et al., 2014). Further, in most developing countries, the tourism industry can legitimately open up new areas to a more discerning market (Font and Tribe, 2001). This can stimulate much-needed economic growth while mitigating negative effects on the natural environment (Blackman et al., 2014). In addition, there is a need to formalize the environmental claims of the tourism industry to build consumer trust in the industry. One way of achieving this is to have impartial and independently run environmental awards/certifications (Font and Tribe, 2001). It is also important that customers are convinced that they should prefer these eco-labeled or certified hotels in their purchasing decisions as "the successful adoption of certification by tourism operators may only be possible if there is a market for certified products" (Esparon et al., 2014: 149). The above discussion thus elaborates that green awards/certificates result not only in direct and indirect benefits at microlevel but also have many economic implications at broad macrolevel.

Literature review and hypothesis development

Consumer perceptions and pro-environmental behaviors of green hotels

Although there is no regulatory or universally accepted definition of what green hotels are (Pizam, 2009), they can be regarded as being environmentally friendly properties whose managers are eager to institute programs that save water, save energy, and reduce solid waste, while saving money to help protect the earth (GHA, 2017). In this study, we specifically focus on those hotels which have won green awards or which have obtained eco-labels/certifications as green hotels.

It has been suggested that a hotel's green practices in gaining green awards or certifications can lead to the satisfaction of guests' emotional needs, which in turn influences their pro-environmental behaviors (Kang et al., 2012). The relationship between green awards or certifications and how consumers' perceptions and pro-environmental behavior are formed can be viewed in different ways. Steg and Vlek (2009) provide an integrative framework for promoting and encouraging pro-environmental behaviors from an environmental psychology perspective. They suggest that motivational factors such as perceived costs and benefits, and morale and normative concerns and other contextual factors, play important roles in promoting pro-environmental behaviors. From the perspective of the perceived costs and benefits, it is suggested that "individuals make reasoned choices and choose alternatives with highest benefits against lowest costs (e.g. in terms of money, effort, and/or social approval)" (Steg and Vlek, 2009: 311). From a moral and normative perspective, the new ecological paradigm of Dunlap and Van Liere (1978), later revised by Dunlap et al. (2000), explains the environmental concerns and intentions to engage in pro-environmental behaviors such as intention to revisit and willingness to pay a premium (Cordano et al., 2003). Confirming this view empirically in the United States, it is found that hotel guests with higher degrees of environmental concerns are willing to pay a premium for a hotel's green initiatives (Kang et al., 2012). In line with the perceived costs and benefits and moral and normative concerns, we argue that the presence of green certificates/awards in hotels can affect perceived value by enhancing an ecologically sound worldview (Dunlap et al., 2000). Further, green hotel management practices such as water conservation and waste reduction, which can be a part of environmental certification and awards, can significantly increase values and pro-environmental intentions (Han et al., 2018). Furthermore, Steg and Vlek (2009) are of the view that contextual factors such as physical facilities, in this case green certifications and/or awards, can influence environmental behavior. These views finally converge, suggesting that hotels' green awards or certifications influence perceived value and pro-environmental behavior, such as intention to revisit and willingness to pay a premium. Grounded on these theoretical insights we next develop the hypotheses of this study.

Hypotheses development

Perceived value has received heightened attention in marketing and other related disciplines due to its important role. Perceived value is typically described from the consumer's perspective (Ryu et al., 2008) and thus is usually defined as the consumer's assessment of a product or a service's perceived benefits and costs (Monroe, 1990; Patterson and Spreng, 1997; Zeithaml, 1988). By extending this work, Chen and Chang (2012) define perceived green value as being "a consumer's overall appraisal of the net benefit of a product or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs" (p. 505). Although the relationship between green hotels and green perceived value is not well

established, generally research indicates, albeit in nonhospitality settings, that green products are positively associated with perceived value (Cheung et al., 2015). Further, in hospitality settings, research shows that visitors view eco-certified or eco-labeled establishments as performing better in many ways (Esparon et al., 2014; Peiró-Signes et al., 2014; Puhakka and Siikamaki, 2012). It is also found that sustainability (or eco) related certification plays a significant role in determining the likelihood of visiting a sustainable hotel (Rubright et al., 2016). Similarly, Lee et al. (2010) found that an image of a green hotel gives rise to favorable behavioral intentions by guests. It has been identified that these behavioral decisions are affected by the perceived value (refer to the following paragraphs for more details). Hence, we can hypothesize the following:

Hypothesis 1 (H1): Green certificates/awards are positively associated with consumers' perceived green value.

Brand image has been long regarded as an important construct in marketing and consumer behavior research (Gardner and Levy, 1955), but there is little consensus on how it can be operationalized (Dobni and Zinkhan, 1990). Brand image plays a crucial role in the competitive strategy of a firm (Keller, 2003). By following previous researchers and an associative network memory model of brand knowledge, Keller (1993) defines brand image as "perceptions about a brand as reflected by the brand associations held in consumer memory" (p. 3). Also, Baloglu and Brinberg (1997) define destination image as the sum of beliefs, ideas/thoughts, and impressions that guests may have in relation to a tourist place or destination. By extending this concept of brand image, Chen (2010a) defines a novel concept, "green brand image," and defines it as "a set of perceptions of a brand in a consumer's mind that is linked to environmental commitments and environmental concerns" (p. 309). With the rising trend in consumer environmentalism and regulations for environmental protection, positive green brand image is becoming paramount for companies (Chen, 2008). Chen (2008) argues that investment in corporate environmental management activities, such as green certification or labels, not only avoids problems about environmental protection but enhances corporate image. In a Taiwanese context, he found that corporate environmental management has a positive influence upon green brand image. Since the green certificates and awards testify to environmental performance through the corporate environmental management of a hotel establishment, we can assume that green certificates or awards enhance corporate green image. Therefore, the second hypothesis is:

Hypothesis 2 (H2): Green certificate/awards are positively associated with green brand image.

Although there is a paucity of empirical studies on how green brand image affects other green-related variables in consumer behavior research, it is generally established that green brand image enhances the image of a commercial entity (see Mourad and Ahmed, 2012). Supporting this argument, Lai et al. (2009) assert that a "positive image makes a consumption experience more gratifying, thus helping customers experience pleasurable social and emotional benefits" (p. 982). They found that image significantly influences perceived value directly in the mobile communications industry in China. In the tourism industry, Ryu et al. (2008) found that destination image significantly influences perceived value in a casual restaurant in the United States. Similarly, Ryu et al. (2012) found that restaurant image is a significant antecedent of customers' perceived value in an upscale Chinese restaurant in the United States. Therefore, our third hypothesis is:

Hypothesis 3 (H3): Green brand image is positively associated with consumers' perceived green value.

Customer satisfaction, a fundamental determinant of long-term customer behavior (Ryu et al., 2008), has long received the attention of many scholars and has been defined in many ways (refer Oliver, 1996; Mai and Ness, 1999). The literature shows that in service contexts, perceived value has been identified as having a direct relationship with customer satisfaction (McDoughall and Levesque, 2000; Patterson and Spreng, 1997). More specifically, in the hotel and hospitality industry, perceived value has been identified as playing a significant role in influencing customer satisfaction (Allameh et al., 2015; Dmitrovic et al., 2009; Ryu et al., 2008). Despite the positive impact of perceived value on satisfaction, Chen (2010) stresses the need to distinguish green satisfaction from general satisfaction. While defining green satisfaction as "a pleasurable level of consumption-related fulfilment to satisfy a customer's environmental desires, sustainable expectations, and green needs" (p. 309), he identifies that customers' perceived green value is positively associated with their satisfaction with sustainability. Based on these findings, we propose the following hypothesis.

Hypothesis 4 (H4): Perceived green value is positively associated with green satisfaction.

Pro-environmental hospitality consumption behavior decisions, such as intention to revisit and willingness to pay a premium, can be determined by a host of factors (Line and Hanks, 2016). Among them, researchers identify that perceived value can influence intention to revisit/repurchase as a determinant or antecedent (Monroe, 1990; Um et al., 2006). Tourists' intention to revisit can be defined as the tourist's willingness to revisit a destination (Luo and Hsieh, 2013). In a similar vein, Han et al. (2009) describe revisit intention as an affirmed likelihood to revisit the restaurant (or tourist destination) in both the absence and presence of a positive attitude toward the provider. In this study, we differentiate green revisiting intention from a general intention to revisit. Accordingly, we define green revisiting intention as "the guests' willingness to revisit a tourist destination to satisfy his/her environmental desires, sustainable expectations, and green needs." Jin et al. (2013) and Allameh et al. (2015) identify that perceived value has a significant effect on behavioral intentions, such as intentions to revisit. Similarly, Lee et al. (2010) identify that value attribute, a part of a cognitive image component, can affect the image of an eco-friendly hotel, which will in turn affect the willingness to revisit. More specifically, Chen and Chang (2012) identify that the green purchase intention is positively affected by the perceived value. Hence, we propose the following hypothesis.

Hypothesis 5 (H5): Perceived green value is positively associated with green intention to revisit.

In introducing the second novel concept, in this study we define customers' intention to pay a green premium as "the customer's willingness to pay extra for a tourist destination which satisfies his/her environmental desires and expectations of sustainability management." Although the data on guests' willingness to pay a premium for green practices show mixed results, there is empirical evidence to support this. For instance, Cryer and Ross (1997) found that customers are willing to pay a higher price to reward a firm's ethical behavior. Similarly in other consumer markets, perceived value and some specific product or service attributes can significantly affect the consumers' willingness to pay a premium (Li et al., 2012; Loureiro and Hine, 2002). In the tourism

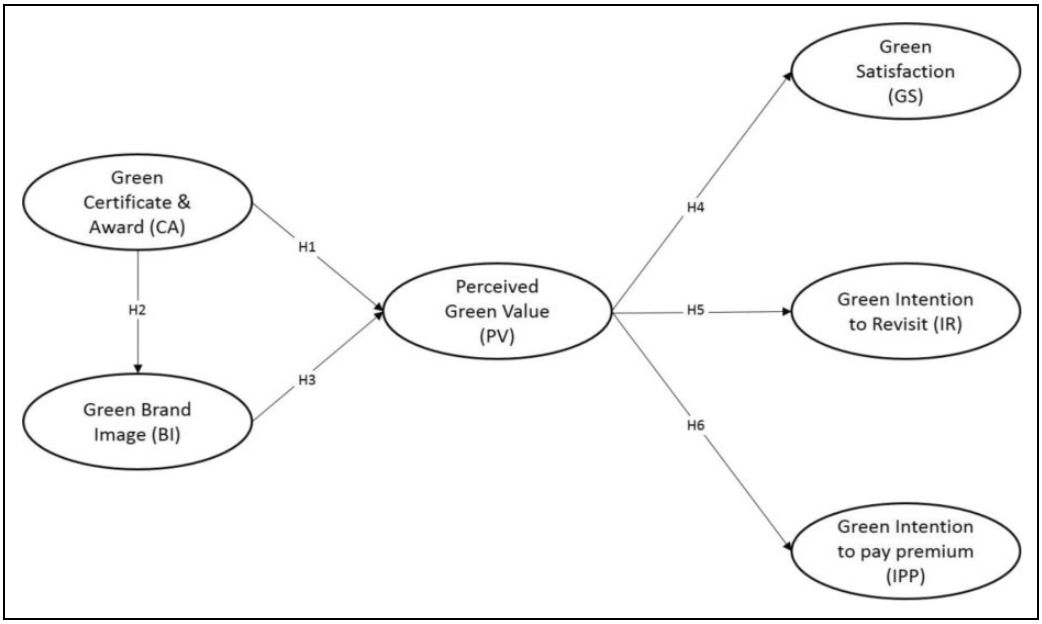

Figure 1. Research model.

industry, Kang et al. (2012) found that guests with higher degrees of environmental concerns are willing to pay a premium for a hotels' environmental initiatives. Dutta et al. (2008) found that restaurant customers in the United States are willing to pay premiums for green practices. Similarly, Kostakis and Sardianou (2012) found that tourists concerned about the environment have the intention to pay a premium for accommodation in a hotel that uses green energy sources. Further, Lee et al. (2010) identify that value can affect the image of a green hotel, which can contribute to more favorable behavioral intentions, such as willingness to pay a premium. Hence, based on this evidence, we hypothesize the following.

Hypothesis 6 (H6): Perceived green value is positively associated with intention to pay a premium for environmentally sustainable products.

Accordingly, our research model is presented in Figure 1.

Methodology and measurement

The unit of analysis in this study is consumer level. The research object of this study focuses on consumers who have had the experience of purchasing hotel products and services in Sri Lanka. This study applied a questionnaire survey to verify the hypotheses and research model. The questionnaire was distributed among 420 randomly selected respondents in the major four cities in Sri Lanka (Colombo, Galle, Kandy, and Gampaha) between April 2016 and September 2016. The potential respondents were contacted face-to-face and briefed about the study to check their suitability and willingness to participate in the survey. Customers who had stayed at a hotel at least once a year and had previous experience in staying at a green hotel within the past 3 years were

Table 1. Respondents' demographic information.

	Frequency
Gender ($N = 250$)	
Male	151
Female	99
Age (years; $N = 250$)	
Below 20	6
21–30	171
31–40	54
41–50	16
Above 50	3
Educational experience ($N = 250$)	
Postgraduate	39
Bachelors	92
Professional	64
High school	47
Other	8

selected as participants in this study. An English version of the hard copy of the questionnaire was distributed to the selected respondents, and it was collected immediately after completion. Despite considerable effort and time, this method ensured a high response rate, with participants paying serious attention to their responses to the survey items. It also allowed the respondents to get clarification on any unclear survey questions/items. After excluding incomplete responses, 250 usable responses were received ($n = 250$, male 151 and female 99) which were finally used in the analysis. The questionnaire consisted of two sections. In the first section, respondents' demographic characteristics were recorded, while the second section collected data on respondents' views on constructs in the research model. Table 1 shows respondents' demographic information including gender, age, and educational background.

As shown in the model, these latent variables, that is, green certificates/awards (three items), green brand image (five items), perceived green value (five items), green intention to revisit (three items), green intention to pay a premium (three items), and green satisfaction (four items) were assessed with items adopted from extant measures to ensure validity and reliability, as shown in Table 2. Survey items for these constructs were developed based on prior research with some minor wording changes to accommodate the study's context (see Table 2). The questionnaire items were scored on a five-point Likert-type scale, ranging from 1: *strongly disagree* to 5: *strongly agree*. The initial survey instrument was pilot tested and improved for clarity by sending it to 20 known parties before the actual data collection.

For both the measurement and the structural model analyses, we conducted partial least squares structural equation modelling (PLS-SEM), which has been widely used in various disciplines such as marketing, information systems, and organizational research. PLS-SEM is a variance-based, nonparametric approach unlike covariance-based SEM (CB-SEM). It is suggested that PLS-SEM can be used to predict key target constructs or to identify suitable predictors (Hair et al., 2017) which is our primary objective. We used SmartPLS 3.0 software to examine the conceptual research framework proposed in the current study.

Table 2. Survey construct and measurement items.

Construct	Item		References
CA	1.	As a hotel visitor/tourist, it is very important to me that hotel and its services are "green" accredited (e.g. ISO 14000 certified) (CA1)	Carvalho et al. (2015); Fraj-Andrés and Martinez-Salinas (2006)
	2.	I am willing to stay at a green hotel which is awarded with ISO 14001 and/or green certificate and award (CA2)	
	3.	I will make an effort to stay at a green hotel which is awarded with ISO 14001 and/or green hotel certificate and award (CA3)	
BI	1.	The brand of a hotel is regarded as the best indicator of its green management practices (BI1)	Padgett and Allen (1997); Cretu and Brodie (2007); Chen (2010a)
	2.	The brand of a hotel has a reputation for environmental quality standard (BI2)	
	3.	A hotel brand is well known and prestigious about green management practices (BI3)	
	4.	A hotel brand is well known about environmental reputation (BI4)	
	5.	A hotel brand is trustworthy about environmental quality and services it provides (BI5)	
	6.	A hotel brand wins awards for its green practices (BI6)	
PV	1.	A hotel's green services provide very good value for me (PV1)	Lee et al. (2010); Chen and Chang (2012)
	2.	A hotel's environmental standards in services meet my expectations (PV2)	
	3.	I purchase the services of a green hotel because it has more environmental concerns than other hotels (PV3)	
	4.	I purchase the services of a green hotel because it is environmentally friendly (PV4)	
	5.	I purchase the services of a specific green hotel because its environmental value for natural protection is greater than other hotels (PV5)	
GS	1.	I am happy about the decision to choose a hotel because of its environmental practices (GS1)	Oliver (1996); Chen (2010a, 2010b)
	2.	I believe that it is a right thing to purchase a hotel's services because of its environmental friendly practices and performance (GS2)	
	3.	Overall, I am glad to stay in a hotel because it is environmental friendly (GS3)	
	4.	Overall, I am satisfied with a hotel because it is environmentally concerned (GS4)	
IPP	1.	I intend to pay premium to stay at a hotel that engages in green practices (IPP1)	Lee and Shin (2010); Chen and Chang (2012); Kang et al. (2012)
	2.	I am willing to pay more to stay at a green hotel when travelling (IPP2)	
	3.	I am willing to spend extra for products and services during my stay in a green hotel (IPP3)	

(continued)

Table 2. (continued)

Construct	Item	References
IR	1. I intend to stay at a green hotel when traveling (IR1) 2. I will make an effort to stay at a green hotel when traveling in the future (IR2) 3. I am willing to stay at a green hotel when travelling (IR3)	Chen and Chang (2012); Kang et al. (2012)

Note: CA: green certificate award; BI: green brand image; PV: perceived green value; GS: green satisfaction; IPP: green intention to pay premium; IR: green intention to revisit.

Results

Measurement model test

Following Gerbing and Anderson's (1988) two-step approach, we tested the measurement model based on confirmatory factor analysis (CFA). Since a single goodness-of-fit criterion is not applicable to PLS-SEM estimations, we used nonparametric evaluation criteria based on bootstrapping and blindfolding (Hair et al., 2017). As shown in Table 3, this study tested the adequacy of the measurements by evaluating the internal reliability and the convergent validity of the constructs (Hulland, 1999). Each construct yielded a Cronbach's α value and composite reliability of greater than 0.70, in support of satisfactory scale reliability (Fornell and Larcker, 1981). The convergent validity of measurement at both the item and construct levels was examined by the factor loadings and average variance extracted (AVE). All individual factor loadings were greater than 0.60, which indicated that there were more variances with the construct measured than with error variances (Gefen et al., 2000). The AVE for each construct exceeded 0.50 (Fornell and Larcker, 1981). In addition, this study tested discriminant validity by comparing the correlations among constructs and AVE values. All constructs exhibited discriminant validity because the square roots of the AVE exceeded the inter-construct correlations, showing that all indicators were better explained by their respective constructs, rather than other constructs explaining indicators in a different construct (Chin, 1998; Fornell and Larcker, 1981) (see Table 4). While goodness-of-fit criteria are not applicable to PLS-SEM (Hair et al., 2017), we assessed the standardized root mean square residual (SRMR), a model fit measure well-known for CB-SEM, as a robustness check based on a previous study by Henseler et al. (2014). A value of SRMR is 0.048 and less than 0.08, indicating a good fit (Hair et al., 2017; Hu and Bentler, 1998).

Hypothesis testing

The six hypotheses were developed to validate the study's conceptual framework. Following the criterion suggested by Hair et al. (2017), we assessed the hypothesized relationships based on the explained variance (R^2) of the dependent variables, path coefficients (β), and their levels of significance obtained from a bootstrapping resampling method (2500 resamples) (Chin, 1998). As shown in Table 5, all proposed hypotheses were supported at $p < 0.001$. First, green certificates and awards were positively associated with consumers' perceived green value (H1: $\beta = 0.17$, $t = 2.32$), supporting H1 in this study. This result indicated that winning green awards and/or obtaining green certifications might have potential, and that existing consumers consider that such an award represents an environmentally sustainable (green) hotel. Second, green certificates and awards

Table 3. Results of the measurement model ($n = 250$).

Construct	Cronbach's α	Composite reliability	AVE	Item	Factor loadings
CA	0.843	0.906	0.763	CA1	0.808
				CA2	0.912
				CA3	0.897
BI	0.842	0.883	0.559	BI1	0.788
				BI2	0.780
				BI3	0.756
				BI4	0.743
				BI5	0.712
				BI6	0.700
PV	0.807	0.866	0.566	PV1	0.687
				PV2	0.693
				PV3	0.779
				PV4	0.787
				PV5	0.807
GS	0.859	0.904	0.702	GS1	0.825
				GS2	0.826
				GS3	0.851
				GS4	0.851
IPP	0.846	0.901	0.752	IPP1	0.901
				IPP2	0.859
				IPP3	0.841
IR	0.864	0.917	0.786	IR1	0.894
				IR2	0.894
				IR3	0.872

Note: AVE: average variance extracted; AVE: average variance extracted; CA: green certificate award; BI: green brand image; PV: perceived green value; GS: green satisfaction; IPP: green intention to pay premium; IR: green intention to revisit.

Table 4. Correlation matrix and discriminant assessment.

	CA	BI	PV	GS	IPP	IR
CA	**0.873**					
BI	0.375	**0.747**				
PV	0.292	0.393	**0.752**			
GS	0.367	0.407	0.592	**0.838**		
IPP	0.425	0.342	0.337	0.348	**0.867**	
IR	0.469	0.386	0.473	0.541	0.581	**0.887**

Note: CA: green certificate award; BI: green brand image; PV: perceived green value; GS: green satisfaction; IPP: green intention to pay premium; IR: green intention to revisit. Bold numbers indicate the square roots of the AVE values for discriminant validity check.

were also positively associated with brand image (H2: $\beta = 0.38$, $t = 6.32$), supporting H2. This result suggested that winning green awards and/or obtaining green certifications has a positive impact on consumers' hotel brand image. Furthermore, consumers' hotel brand image positively affects brand image (H3: $\beta = 0.33$, $t = 5.16$), thus supporting H3. As we proposed, perceived green

Table 5. Hypothesis testing result.

Structural paths	β	SE	t-ratio	R^2	f^2	Q^2	Hypothesis testing
CA → PV (H1)	0.17	0.07	2.32	—	—	—	Supported*
CA → BI (H2)	0.38	0.06	6.32	0.14	0.16		Supported***
BI → PV (H3)	0.33	0.06	5.16	0.18	0.11		Supported***
PV → GS (H4)	0.59	0.07	8.72	0.35	0.54	0.24	Supported***
PV → IR (H5)	0.47	0.07	7.01	0.22	0.29	0.17	Supported***
PV → IPP (H6)	0.34	0.06	5.46	0.11	0.13	0.07	Supported***

Note: CA: green certificate award; BI: green brand image; PV: perceived green value; GS: green satisfaction; IPP: green intention to pay premium; IR: green intention to revisit.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

value played a pivotal role in affecting green satisfaction (H4: $\beta = 0.59$, $t = 8.72$), green intention to revisit (H5: $\beta = 0.47$, $t = 7.01$), and green intention to pay a premium (H6: $\beta = 0.34$, $t = 5.46$). Furthermore, we assessed the f^2 effect size (Cohen, 1988) and Stone–Geisser's Q^2 value (Geisser, 1974; Stone, 1974). Both values indicated that our model is effective and exhibits predictive relevance.

General findings and economic implications

Ecotourism, green hotels, and the development of a culture of hospitality are becoming popular in developing countries where there are still abundant natural resources. These assets give developing countries a natural advantage in managing tourism activities, promoting a smooth process of economic development without damaging the natural environment (Blackman et al., 2014). Tourism, with its attendant hotels, transportation operations, roads, and other supporting infrastructure, generates pollution and damages biodiversity and the natural environment. Further, tourism spurs the economic growth that multiplies these negative effects on the natural environment. The dilemma that exists between the need for economic development and environmental protection is especially acute in developing countries, such as Sri Lanka, where nature-based tourism is increasingly important. In Sri Lanka, the government has paid special attention to the development of the tourism sector in the period following the long civil war which ended in 2009 (CBSL, 2017). Tourism offered viable options to boost economic growth with its low level of start-up costs and few entry barriers (Spenceley, 2012). However, promotion of tourism activities in environmentally sensitive areas in Sri Lanka spurred wide criticism from environmental lobby groups and media. Hotels and tour operators who do not focus on their environmental performance can undoubtedly damage the long-term sustainability of the unspoiled natural environment in their bid to harness short-term economic gains. This is where green awards, eco-labels, or green certificates are becoming increasingly important in developing countries such as Sri Lanka, creating incentives for tourist operations to improve their environmental performance. The hotel and hospitality industries can disclose reliable information about their performance, thereby enabling consumers and civic society to reward green hotels and green operators and penalize dirty ones (Dodds and Joppe, 2005).

While green awards and certificates spur such environmental improvements as saving water and energy, using eco-friendly purchasing policies, waste reduction, and waste management, they also should provide green operators and hotels with significant private economic benefits such as price premiums and more customers (Gunarathne and Lee, 2015; Keller, 1993, 2003; Shrivastava,

1995). Because certification standards and application fees are costly, green certificates and awards should generate economic returns sufficient to at least offset these costs, otherwise few hotels and operators will participate. The results of the current study are consistent with Esparon et al.'s (2014) study, which revealed that eco-certified operators are perceived as performing better in providing sustainable accommodation than non-eco-certified operators. Although Esparon et al. (2014) did not test any hypothesis, they paid particular attention to "consumers"—how consumers perceive ECO certification and how they value the scheme. This study further advances our understanding of the question "does ECO certification pay?" from the consumers' perspective. That is, how consumers perceive green certificate and awards, and how perceived green value can link to green behavioral attention, including green intention to revisit and green intention to pay a premium. This study finds that (i) green certificates and awards are positively associated with consumers' perceived green value; (ii) green certificates and awards are positively associated with green brand image, and green brand image is also positively associated with perceived green value. Perceived green value plays a pivotal role in affecting green satisfaction, green intention to revisit, and green intention to pay a premium.

This study also provides several valuable economic implications. Most economic impacts and implications of tourism and hospitality research are dominated by economic impact models or modeling approaches at macrolevel. For example, Bonn and Harrington (2008) examined the differences and characteristics of three economic impact models (the capacity utilization model, regional economic models, and the impact analysis for planning model) in hospitality and tourism research. In the context of economic growth and ecotourism, Marsiglio (2015) proposed a stylized dynamic economic model to examine tourism activities as a trigger for incentive mechanisms to lead to economic growth. Similarly Kim et al. (2013) examined the relationship among tourism, poverty, and economic development in 69 developing countries for the periods of 1995 and 2012. They found that tourism has a positive effect on economic development. More recently, Hoa and Vu (2018) examined the economic impact of Chinese tourism on Australia, based on an endogenous causal model of simultaneous growth and tourism. Although macrolevel economic modeling research in tourism and hospitality can benefit researchers and policy makers in developing policies regarding economic development, directions, and specific guidelines on how to enhance microlevel economic impacts and locally oriented ecotourism and green hotel hospitality are very limited.

In this study, consumers' awareness of green awards and certification, as well as green brand image, is positively associated with actual intention to revisit and to pay a premium for hotel products and services. This finding brings very important microlevel economic implications for operational approaches and actual activities to create economic benefits. First, the success of ecotourism and green hotels depends on consumers' confidence in the quality of the products and services that green awards and certificates endorse. Thus, it is very important for hotel and tourism operators to translate green products and services through consumers' pro-environmental behaviors, such as intention to revisit or willingness pay a premium price. By meeting consumers' needs and obtaining their confidence in green products and services, tourism and hotel businesses can increase their financial performance (Font and Tribe, 2001). Second, although some consumers are willing to pay a premium for green hotel and tourism products and services, there is little solid evidence that this "willingness" translates into actual practice (Esparon et al., 2014). Using Steg and Vlek's (2009) perceived cost and benefit perspective, it is clear that in the absence of satisfaction through perceived green benefits and cost issues, it will not be easy to motivate consumers to actually purchase green products and services. A lack of demonstrated commitment to ecotourism and green hotels may spill over to a lack of demand for green-certified or labeled tourism

and hotel products and services. Third, successful adoption and implementation of green awards and certificates by tourism operators and hotels may depend on consumers' understandings and the value of the "green" products and services. This view supports Steg and Vlek's (2009) moral and normative perspective, underpinned in the new ecological paradigm of Dunlap and Van Liere (1978) and Dunlap et al. (2000). Many green awards and certificates are run by NGOs and government agencies, who need significant skills and experience to effectively target consumers in developing countries such as Sri Lanka. To be able to effectively market to consumers, green marketing professionals should become involved in promoting green awards and certification programs by demonstrating better value for green products and services and making this visible to consumers. This will be essential in enhancing hedonic value, which relates to obtaining emotional/affective benefits, such as joy and pleasure, while consuming the services of green hotels and experiencing their attributes (Han et al., 2018). Fourth, when green awards and certificates improve the average environmental quality of products and services in tourism and hotel management, cost savings and enhanced reputation will bring tangible and intangible values to local communities and even to the national economy. With the high contribution of tourism and increased numbers of visitors, Sri Lanka has recently achieved a steady economic growth rate of more than 6% after three decades of civil war (CBSL, 2017). However, recently, the country's pursuit of economic development has been associated with many environmental challenges such as waste management, environmental pollution, and degradation. For the tourism sector in Sri Lanka to become sustainable, it is also important to achieve both economic and environmental sustainability ("win-win") in a visible manner. Without showing the actual financial and environmental performance outcomes, it will not be easy to motivate tourism operators and hotels to participate in green awards and certificate schemes for sustainable tourism.

Conclusions

The objective of this study is to examine the effects of green awards and certificates on consumers' perceived green value and their behavioral intentions. The results of the analysis show the positive effects of green awards and certificates on consumers' perceived green value in the hotel industry. More importantly, consumers' perceived value links positively to green behavioral intentions, including intention to revisit and intention to pay a premium. Therefore, this study confirms that the hotel industry's efforts to achieve green awards and certificates can bring positive impacts on consumer's perceived value, leading to positive behavioral intentions such as revisiting and paying premiums. In our methods, using PLS-SEM, we test our proposed constructs' suitability as predictors and find that predictors are very suitable for the model.

Given the international scope of green initiatives and corporate hotel activities today, it is important to understand whether green activities and investment to achieve green awards and certificates are perceived in the same manner across borders. In developing countries like Sri Lanka, this study shows strong positive relationships between green certificates and awards and consumers' perceptions and behavioral intentions. We suggest that hotel and hospitality researchers in the area of green management and green hotels either make comparative studies on a global scale to generalize our findings or even look for more diverse theoretical and empirical aspects and findings to make meaningful contributions. As a path for future research, we recommend an investigation into the extent to which consumers are aware of the green practices and activities of a set of corporations in the hotel and hospitality industry in different countries. In the marketplace, consumers are highly likely to encounter multiple-sourced green and sustainability

related information in different domains simultaneously. Thus, future research investigating multiple exposure effects in consumers' responses to green practices and activities would add value to our findings. Moreover, future researchers may consider applying an experimental design or mixed methods approach to clearly show the impact of green certificate awards on perceived value and other subsequent behavioral intentions.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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References

Allameh SM, Pool JK and Jaberi A (2015) Factors influencing sport tourists' revisit intentions: the role and effect of destination image, perceived quality, perceived value and satisfaction. *Asia Pacific Journal of Marketing and Logistics* 27: 191–207.

Baloglu S and Brinberg D (1997) Affective images of tourism destinations. *Journal of Travel Research* 35: 11–15.

Becker-Olsen K, Cudmore B and Hill R (2006) The impact of perceived corporate social responsibility on consumer behavior. *Journal of Business Research* 59: 46–53.

Blackman A, Naranjo M and Robalino J (2014) Does tourism eco-certification pay? Costa Rica's Blue Flag Program. *World Development* 58: 41–52.

Bonn M and Harrington J (2008) A comparison of three economic impact models for applied hospitality and tourism research. *Tourism Economics* 14: 769–789.

Carvalho B, Salgueiro M and Rita P (2015) Consumer sustainability consciousness: a five dimensional construct. *Ecological Indicators* 58: 402–410.

Cater E (1993) Ecotourism in the third world: problems for sustainable tourism development. *Tourism Management* 14: 85–90.

Central Bank of Sri Lanka (CBSL) (2017) *Annual Report 2017*. Colombo: CBSL.

Chen YS (2010a) The drivers of green brand equity: green brand image, green satisfaction, and green trust. *Journal of Business Ethics* 93: 307–319.

Chen YS (2010b) Towards green loyalty: driving from green perceived value, green satisfaction, and green trust. *Sustainable Development* 21: 294–308.

Chen Y and Chang C (2012) Enhance green purchase intentions: the roles of green perceived value, green perceived risk, and green trust. *Management Decision* 50: 502–520.

Cheung R, Lam AY and Lau MM (2015) Drivers of green product adoption: the role of green perceived value, green trust and perceived quality. *Journal of Global Scholars of Marketing Science* 25: 232–245.

Chin WW (1998) The partial least squares approach to structural equation modeling. *Modern Methods for Business Research* 295: 295–336.

Cohen J (1988) *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Mahwah: Lawrence Erlbaum.

Cordano M, Welcomer SA and Scherer RF (2003) An analysis of the predictive validity of the new ecological paradigm scale. *The Journal of Environmental Education* 34: 22–28.

Cretu E and Brodie R (2007) The influence of brand image and company reputation where manufacturers market to small firms: a customer value perspective. *Industrial Marketing Management* 36: 230–240.

Cryer E and Ross W (1997) The Influence of Firm Behavior on purchase intention: Do consumers really care about business ethics? *Journal of Consumer Marketing* 14: 421–433.

Darnall N and Sides S (2008) Assessing the performance of voluntary environmental programs: Does certification matter? *Policy Studies* 36: 95–117.

Dmitrovic T, Ljubica KC, Kolar T, et al. (2009) Conceptualizing tourist satisfaction at the destination level. *Tourism and Hospitality Research* 3: 116–126.

Dobni D and Zinkhan GM (1990) In search of brand image: a foundation analysis. *Advances in Consumer Research* 17: 110–119.

Dodds R and Joppe M (2005) *CSR in the Tourism Industry? The Status of and Potential for Certification, Codes of Conduct and Guidelines. Study Prepared for the CSR Practice*. Washington: Foreign Investment Advisory Service, Investment Climate Department.

Dunlap RE and Van Liere KD (1978) The "new environmental paradigm": a proposed measuring instrument and preliminary results. *Journal of Environmental Education* 9: 10–19.

Dunlap RE, Van Liere KD, Mertig AG, et al. (2000) Measuring endorsement of the new ecological paradigm: a revised NEP scale. *Journal of Social Issues* 56: 425–442.

Dutta K, Umashankar V and Choi G (2008) A comparative study of consumers' green practice orientation in India and the United States: a study from the restaurant industry. *Journal of Foodservice Business Research* 11: 269–285.

Enz CA and Siguaw JA (1999) Best Hotel Environmental practices. *The Cornell Hotel and Restaurant Administration Quarterly* 40: 72–77.

Esparon M, Gyuris E and Stoeckl N (2014) Does ECO certification deliver benefits? An empirical investigation of visitors' perceptions of the importance of ECO certification's attributes and of operators' performance. *Journal of Sustainable Tourism* 22: 148–169.

Font X and Tribe J (2001) Promoting green tourism: the future of environmental awards. *The International Journal of Tourism Research* 3: 9–21.

Fornell C and Larcker DF (1981) Structural equation models with unobservable variables and measurement error: algebra and statistics. *Journal of Marketing Research* 18: 382–388.

Fraj-Andrés E and Martinez-Salinas E (2006) Environmental values and lifestyles as determining factors of ecological consumer behavior: an empirical analysis. *Journal of Consumer Marketing* 23: 133–144.

Fraj-Andrés E, Martinez-Salinas E and Matute-Vallejo J (2009) A multidimensional approach to the influence of environmental marketing and orientation on the firm's organizational performance. *Journal of Business Ethics* 88: 263–286.

Gao Y, Mattila A and Lee S (2016) A meta-analysis of behavioral intentions for environment-friendly initiatives in hospitality research. *International Journal of Hospitality Management* 54: 107–115.

Gardner BG and Levy SJ (1955) The product and the brand. *Harvard Business Review*, March–April, pp. 33–39.

Gefen D, Straub D and Boudreau M (2000) Structural equation modeling and regression: guidelines for research practice. *Communications of the Association for Information Systems* 4: 1–77.

Geisser S (1974) A predictive approach to the random effect model. *Biometrika* 61: 101–107.

Gerbing DW and Anderson JC (1988) An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research* 25: 186–192.

GHA (2017) What are green hotels? Available at: http://www.greenhotels.com/ (accessed 10 April 2017).

Gunarathne N and Lee KH (2015) Environmental Management Accounting (EMA) for environmental management and organizational change: an eco-control approach. *Journal of Accounting & Organizational Change* 11: 362–383.

Hair JF, Hult GT and Ringle CM (2017) *A Primer on Partial Least Squares Structural Equations Modelling (PLS-SEM)*. Los Angeles: SAGE.

Han H, Back KJ and Barrett B (2009) Influencing factors on restaurant customers' revisit intention: the roles of emotions and switching barriers. *International Journal of Hospitality Management* 28: 563–572.

Han H, Hsu L and Sheu C (2010) Application of the theory of planned behavior to green hotel choice: testing the effect of environmental friendly activities. *Tourism Management* 31: 325–334.

Han H, Lee JS and Trang HLT (2018) Water conservation and waste reduction management for increasing guest loyalty and green hotel practices. *International Journal of Hospitality Management* 75: 58–66.

Henseler J, Dijkstra T, Sarstedt M, et al. (2014) Common beliefs and reality about PLS: comments on Rönkkö & Evermann (2013). *Organizational Research Methods* 17: 182–209.

Hoa T and Vu L (2018) Economic impact of Chinese tourism on Australia: a new approach. *Tourism Economics* 24(6): 677–689. DOI: 10.1177/1354816618769077.

Hu LT and Bentler PM (1998) Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification. *Psychological methods* 3: 424–453.

Hulland J (1999) Use of Partial Least Squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal* 20: 195–204.

Jin N, Lee H and Lee S (2013) Event quality, perceived value, destination image, and behavioral intention of sports events: the case of the IAAF world championship, Daegu, 2011. *Asia Pacific Journal of Tourism Research* 18: 849–864.

Kang KH, Stein L and Heo CY (2012) Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management* 31: 564–572.

Keller KL (1993) Conceptualising, measuring and managing customer-based brand equity. *Journal of Marketing* 57: 1–22.

Keller KL (2003) *Strategic Brand Management: Building, Measuring and Managing Brand Equity*. Upper Saddle River: Prentice Hall.

Kim WG, Li J and Han JS (2017) The influence of recent hotel amenities and green practices on guests' price premium and revisit intention. *Tourism Economics* 23: 577–593.

Kim YJ, Njite D and Hancer M (2013) Anticipated emotion in consumers' intentions to select eco-friendly restaurants: augmenting the theory of planned behavior. *International Journal of Hospitality Management* 34: 255–262.

Kleinrichert D, Ergul M and Johnson C (2012) Boutique hotels: technology, social media and green practices. *Journal of Hospitality and Tourism Technology* 3: 211−225.

Kostakis I and Sardianou E (2012) Which factors affect the willingness of tourists to pay for renewable energy? *Renewable Energy* 38: 169−172.

Lai F, Griffin M and Babin BJ (2009) How quality, value, image, and satisfaction create loyalty at a Chinese telecom. *Journal of Business Research* 62: 980−986.

Laroche M, Bergeron J and Barbaro-Forleo G (2001) Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing* 18: 503–520.

Lee TH (2009) A structural model to examine how destination image, attitude, and motivation affect the future behavior of tourists. *Leisure Sciences: An Interdisciplinary Journal* 31: 215−236.

Lee JS, Hsu LT and Han H (2010) Understanding how consumers view green hotels: How a hotel's green image can influence behavioral intentions. *Journal of Sustainable Tourism* 18: 901−914.

Lee KH and Shin D (2010) Consumers' responses to CSR activities: the linkage between increased awareness and purchase intention. *Public Relations Review* 36: 193−195.

Li G, Li G and Kambele Z (2012) Luxury fashion brand consumers in China: perceived value, fashion lifestyle, and willingness to pay. *Journal of Business Research* 65: 1516–1522.

Line ND and Hanks L (2016) The effects of environmental and luxury beliefs on intention to patronize green hotels: the moderating effect of destination image. *Journal of Sustainable Tourism* 24: 904–925.

Loureiro ML and Hine S (2002) Discovering niche markets: a comparison of consumer willingness to pay for local (Colorado Grown), organic, and GMO-free products. *Journal of Agricultural and Applied Economics* 34: 477−487.

Luo SJ and Hsieh LY (2013) Reconstructing revisit intention scale in tourism. *Journal of Applied Sciences* 13: 3638−3648.

Mai LW and Ness MR (1999) Canonical correlation analysis of customer satisfaction and future purchase of mail-order speciality food. *British Food Journal* 101: 857–870.
Manaktola K and Jauhari V (2007) Exploring consumer attitude and behavior towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management* 19: 364–377.
Marsiglio S (2015) Economic growth and environment: tourism as a trigger for green growth. *Tourism Economics* 21: 183−204.
McDoughall GH and Levesque T (2000) Customer satisfaction with services: putting perceived value into the equation. *Journal of Services Marketing* 14: 392−410.
Moisander J (2007) Motivational complexity of green consumerism. *International Journal of Consumer Studies* 31: 404−416.
Monroe K (1990) *Pricing: Making Profitable Decisions*. New York: McGraw-Hill.
Mourad M and Ahmed Y (2012) Perception of green brand in an emerging innovative market. *European Journal of Innovation Management* 15: 514−537.
Oliver RL (1996) Varieties of value in the consumption satisfaction response. *Advances in Consumer Research* 23: 143−147.
Padgett D and Allen D (1997) Communicating experiences: a narrative approach to creating service brand image. *Journal of Advertising* 26: 49−62.
Patterson P and Spreng R (1997) Modeling the relationship between perceived value, satisfaction and repurchase intention in a business-to-business, service context: an empirical examination. *International Journal of Service Industry Management* 8: 414−434.
Peiró-Signes A, Segarra-Oña MD and Verma R (2014) The impact of environmental certification on hotel guest ratings. *Cornell Hospitality Quarterly* 55: 40–51.
Pizam A (2009) Green hotels: A fad, ploy or fact of life? *International Journal of Hospitality Management* 28: 1−12.
Puhakka R and Siikamaki P (2012) Nature tourists' response to ecolabels in Oulanka PAN Park, Finland. *Journal of Ecotourism* 11: 56–73.
Rubright H, Kline C and Virenc P (2016) Attraction sustainability in North Carolina and its impact on decision-making. *Tourism Management Perspectives* 19(A): 1–10.
Ryu K, Han H and Kim TH (2008) The relationships among overall quick-casual restaurant image, perceived value, customer satisfaction, and behavioral intentions. *International Journal of Hospitality Management* 27: 459–469.
Ryu K, Lee HR and Kim W (2012) The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management* 24: 200–223.
Shrivastava P (1995) Environmental technologies and competitive advantage. *Strategic Management Journal* 16: 183–200.
Spenceley A (2012) *Responsible Tourism: Critical Issues for Conservation and Development*. Oxon: Routledge.
Steg L and Vlek C (2009) Encouraging pro-environmental behavior: an integrative review and research agenda. *Journal of Environmental Psychology* 29: 309–317.
Stone M (1974) Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society* 36: 111–147.
Straughan RD and Roberts JA (1999) Environmental segmentation alternatives: a look at green consumer behavior in the new millennium. *Journal of Consumer Marketing* 16: 558–575.
Um S, Chon K and Ro Y (2006) Antecedents of revisit intention. *Annals of Tourism Research* 33: 1141–1158.
Zeithaml VA (1988) Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing* 52: 2–22.
UNWTO-SNV (2010) *Manual on Tourism and Poverty Alleviation: Practical Steps for Destinations*. Madrid: UNWTO-SNV.

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